

REGULATION AND MANAGEMENT

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A BASE PROGRAM ANALYSIS SUMMARY

Regulation and Management of New Hampshire's Estuaries: A Base Program Analysis reviews the management framework of New Hampshire's estuaries. The report was prepared by Carl Paulsen and submitted by NH Department of Fish and Game and the Great Bay National Estuarine Research Reserve to the NH Estuaries Project. This review and the Technical Characterization of Estuarine and Coastal New Hampshire (summarized in Chapter 2: State of the Estuaries) prepared by the UNH Jackson Estuarine Laboratory, provided a baseline for developing the New Hampshire Estuaries Project Comprehensive Conservation and Management Plan. The Base Program Analysis (BPA) identifies the institutional framework for managing the estuaries, assesses the effectiveness of that framework, and recommends changes to address weaknesses or limitations.

The NHEP project area covers the entire watershed for the estuaries. Towns as far west as Candia and as far north as Wakefield are within the drainage basin. Although approximately one third of the watershed lies in the state of Maine, the NHEP is focused on the New Hampshire portion. In recognition of the importance of proximity to the estuaries, the project was divided into two areas: Zone A and Zone B (see inside cover). Zone A municipalities are those towns that border on tidal waters, plus Rochester and Somersworth. Zone B municipalities are those in the drainage area but with no tidal shoreline. The BPA review of the local management framework focuses primarily on Zone A municipalities.

Inadequate funding and enforcement were general themes that arose out of the analysis across program areas. Staffing and funding levels vary across programs, but state and local budgets are generally limited, impeding the effectiveness of the programs. Some federal budgets (eg., point source permitting) are also limited. Limits are reflected in work loads, backlogged permits, availability of staff for assistance, and in some cases, lack of programs. Despite these limitations, state programs tend to be well coordinated. State agencies and their staff often have developed strong relationships among programs to share responsibilities and information. Coordination between state and federal programs is less effective, with several instances of problems identified during this project.

While funding is not a panacea for all weaknesses in environmental protection, budget improvements are clearly needed. Creative funding strategies can supplement state general funds. For example, stormwater utilities that

create a fee structure to fund stormwater management may be applicable, especially in NPDES Phase II communities.

Enforcement is another weak link in the regulatory framework of the estuaries. The sheer number of septic systems renders system maintenance and performance requirements unenforceable, and the state has not developed an alternative approach for ensuring proper maintenance and repair. Although the NH DES Site Specific Program has significantly improved its monitoring commitment since 1999, program staff limitations have inhibited monitoring of NH Department of Transportation projects for stormwater and erosion control. Local regulations are also only partially enforced. Enforcement officials are often not fully aware of permit requirements. In some cases, permit conditions are never monitored and there are no local programs to ensure long-term monitoring and maintenance of stormwater and erosion control measures.

The NHEP's focus on New Hampshire, while nearly one third of the drainage area lies in Maine, may be an important limitation. As a result of the single state focus, only a limited examination of policies in the state of Maine was included in the BPA report.

The Base Program Analysis made recommendations for each policy area highlighted below. The recommendations were developed into Action Plans. (The number of the Action Plan is shown in parentheses after each recommendation.) Where no Action Plan number is referenced, Action Plans are still under development.

Non-point Source Pollution

The most important non-point source problems in the estuaries of New Hampshire are stormwater runoff, septic system problems, and construction runoff and erosion. A wide variety of other non-point source contributors such as agriculture, boating, solid waste management, toxic/hazardous wastes, and underground storage tanks add to the cumulative effects of non-point source pollution. The coastal basin has the highest priority for dedication of resources within the state's new watershed approach to non-point source pollution.

- Improve regulatory approach and/or state funding of non-point source programs – Non-point source pollution is incremental, and difficult or impossible to identify. New Hampshire's pollution policy of 'anti-degradation' relies on being able to attribute the cause of pollution to a single responsible person or organization. While funding is not a panacea, the state appears to have provided little funding to address non-point source pollution. Recent increases in shoreline and sanitary surveys and related activities seem to reflect the recent influx of funds through the NHEP, rather than a sustained increase in state support. [Action WQ-16]
- Continue to evaluate and revise Best Management Practices – New Hampshire relies heavily on BMPs for control of non-point source pollution, yet many BMPs are out-dated or inadequate. The state is beginning to examine stormwater BMPs for appropriateness for



New Hampshire conditions and effectiveness in protecting water quality. Other BMPs also need review and revision. Most importantly, the state needs to shift focus from flood and volume control to overall water resource management. Since BMPs are the foundation of the state's non-point source management efforts, this research should receive substantial focus and resources. Results from this research should be incorporated into the Green Book and widely circulated, and the Green Book should be updated regularly. [Action WQ-10]

- Improve local regulation of stormwater and erosion control – Local governments should adopt standards for erosion control and long-term stormwater management. Current coverage among Zone A municipalities is limited, and requirements are highly variable. By adopting the standards of the Green Book by reference, as the state recommends, municipalities can avoid having to update their ordinances frequently. Pooper-scooper laws, hazardous waste collection programs, storm drain stenciling, and other programs foster improved runoff quality, but are rarely used. [Actions WQ-9, WQ-10, WQ-19]
- Explore ways to improve outreach efforts for local officials – Low participation by volunteer local officials in educational and training workshops has probably slowed progress in developing strong resource protection regulations. [Actions LND-5]
- Work to improve local regulation of development project impacts – Local regulation, monitoring and enforcement is needed to supplement the state program, while state support of the Site Specific Program needs to be improved. (Actions LND-2, LND-4, LND-6B, LND-6E, LND-7, LND-8A, LND-8B, LND-9A, LND-9B)
- Improve education of shoreland property owners – Given the potential for water quality and habitat impacts, activities within close proximity to surface waters should receive special attention. Education of shorefront property owners regarding laws and responsibilities (e.g., appropriate landscaping activities) is important. [Actions LND-14 LND-16, EDU-4, WQ-13]
- Increase land protection through acquisition or conservation easements – One of the most effective means for protecting water quality and important habitat is to limit development in proximity to sensitive resources. [Actions LND-26, LND-27, LND-28, LND-29, LND-35, LND-36]
- NHEP should work with the state to allow the use of Clean Water State Revolving Loan Fund (SRF) money for activities identified as priorities through the Management Plan – The state's restriction of Clean Water Act SRF money to landfill closure and wastewater treatment facility construction and upgrade limits the effectiveness and benefits of these funds in the Seacoast watersheds. [Action WQ-16]

Point Source Pollution

A relatively extensive and well coordinated set of state and federal regulations address point sources of pollution. The federal Clean Water Act and state Water Pollution and Waste Disposal Act require permits for point sources, and a reasonable amount of technical and financial assistance is available for construction, system upgrade, and operation and maintenance. Staffing limits may cause some delays and/or inadequacies in permitting and oversight.

- Develop a coordinated program and funds to identify and resolve illicit connections, infiltration and inflow, leaky collection systems, and similar problems – These activities are currently implemented haphazardly as funds are available. Since pathogens are one of the primary water quality concerns for the estuaries, greater commitment to resolving the known factors is needed. [Actions WQ-4A, WQ-4B, WQ-4C, WQ-7]
- Improve local regulations to prevent contamination of stormwater runoff – Regulations aimed at preventing non-point source pollution are key to eliminating urban stormwater runoff problems. [Actions WQ-8, WQ-9, WQ-10, LND-23, WQ-18, LND-5, LND-22]
- Continue investigations into stormwater management technology for improving runoff quality – Research should continue to focus on potential solutions for contamination from stormwater runoff systems. [Actions WQ-8, LND-1, LND-2, LND-3]
- Improve training of WWTF operators – Concerns about the adequacy of the state's existing training programs warrant evaluation and improvement of the programs. [Action WQ-3]

Habitat Alteration

Despite recent development, a significant portion of the estuarine watershed remains undeveloped, or lightly developed. Some estuary shoreland areas also remain relatively undeveloped. State regulations protect certain shoreland areas, and shoreland protection is well coordinated among state agencies. These regulations restrict land use in shoreland areas near large surface water bodies, but smaller water bodies are left unprotected. Limited state budgets effectively leave primary implementation and enforcement to municipalities. Local governments, however, are often reluctant to implement their own land use controls in shoreland areas, and may be even more reluctant to enforce them. Only seven of the 19 Zone A towns have adopted local shoreland protection districts.

Shoreland Development and Riparian Buffers

- Improve implementation and enforcement of Comprehensive Shoreland Protection Act (CSPA) – The NH DES Shoreland Protection Program, in cooperation with the NH Coastal Program and Regional Planning Commissions, should strengthen efforts to implement and enforce the CSPA through education and outreach to



Planning Boards and Code Enforcement Officers (CEOs). Budget increases or alternative funding sources are also needed. Municipalities should be encouraged to develop shoreland protection ordinances that apply to smaller streams.[Actions LND-14, LND-16, LND-17]

- Use real estate transfers for outreach about shoreland protection – Real estate transfer presents an opportunity to inform new landowners of their responsibilities as waterfront property owners. [Actions WQ-13, EDU-4]

Wetland Loss and Alteration

- Develop wetlands mitigation policy – NH DES should develop and adopt a formal wetland mitigation policy and increase the use of mitigation through the state permit process. [Actions LND-7, LND-24]
- Track impacts to wetlands from permitted and non-permitted activities – Cumulative impacts of permitted activities are not currently monitored but should be, and estimates of non-permitted (e.g. illegal) filling should be developed.
- Protect vernal pools – NH DES, in cooperation with local officials, Conservation Commissions, and Regional Planning Commissions, should develop a program for protecting vernal pools. [Actions LND-32, LND-26, LND-28, LND-33, LND-34, LND- 35, LND-36]

River and Estuary Protection

- Develop a more comprehensive approach to water habitat protection and improve coordination of surface water programs – The new approach should include addressing issues around consumption of ground and surface waters.
- Improve coordination of NH DOT projects with agencies that protect natural resources – Existing practices of meeting with state and federal agency officials to review projects should be expanded and formalized. NH DOT should be more environmentally accountable. [Actions RST-5, RST-6]

Open Space and Habitat Protection

- Revive Land Conservation and Investment Program (LCIP) – The state should revive the LCIP and seek new funding mechanisms to ensure priority conservation sites are protected. Federal agency and private sector programs could be used to leverage a highly effective land conservation program. [Action LND-26]
- Encourage local governments to earmark all of the Current Use change tax penalty for land protection efforts. [Actions LND-28, LND-35]

Living Resource Management

Most living resources in the NHEP study area are healthy. Some shellfish populations and several species of anadromous fish face problems. Management is primarily at the state level, spread among several agencies. The NH Fish and Game Department has lead responsibility for fish and wildlife, while the Natural Heritage Inventory Program of the NH Department of Resources and Economic Development (NH DRED) handles most aspects of plant protection. The NH Department of Health and Human Services plays a role in harvesting of species where public health is a concern. Municipalities have little authority to manage living resources, and the federal government generally has regulatory authority only in the cases of threatened or endangered species and wild species commerce.

Finfish Management

- Ensure NH Fish and Game budgets and staff remain sufficient to manage fisheries regardless of fishing effort – This includes maintaining an active role in federal and interjurisdictional fisheries management to ensure regulations support New Hampshire fisheries goals and improving fisheries resource inventories. Gaps exist in the stock assessments and species information on which adequate management depends.

Shellfish Management

- Develop a shellfish program that meets the requirements of the NSSP and provides for adequate management of shellfish resources – This includes taking the necessary steps to gain FDA approval of the state's shellfish program. Financing strategies should ensure the shellfish program is self-sustaining. [Actions SHL-1, SHL-4]
- Improve shellfish management coordination – State and federal shellfish sanitation programs need to improve communication and coordination. [Action SHL-1]
- Identify and mitigate pollution sources – Existing pollution sources are probably significant enough to prevent recreational harvesting or commercial aquaculture in some areas. Mitigation of these sources will have wide-spread benefits for the estuaries. Federal, state, and local governments should focus more resources on identifying and mitigating pollution sources. [Actions SHL-2, SHL-5; WQ-1, WQ-3, WQ-4C, WQ-5, WQ-6, WQ- 7, WQ-14]
- Educate audiences about illegal shellfish harvesting – Such efforts might involve state, local, and non-governmental partnerships. [Actions SHL-9B, SHL-10, SHL-13, SHL-14]
- Improve shellfish resource inventories – Gaps exist in the stock assessments and species information on which adequate management depends. [Action SHL-7]

Endangered Species

- Improve and sustain staffing and resources for protection of rare species – The staffing level at the Natural Heritage Inventory Program probably limits the effectiveness of the program. Several of the staff are provided by non-state organizations supported by non-state funds. The rare animal program is similarly hampered. Revenue from a conservation license plate might provide an appropriate budget source. [Actions LND-32, LND-33, LND-34]
- Improve rare species inventories – Conservation Commissions and UNH students have provided valuable assistance in assessing natural resources at the local level. [Actions LND-32, LND-33, LND-34]

Marine Aquaculture

- Determine state commitment to aquaculture development and develop formal state policy – Since regulations and programs affecting aquaculture involve several agencies, such a policy should be developed through a coordinated, multi-agency effort (including NHFG, NH DHHS, NH DAMF, NH DES, et al.). [Actions SHL-15, SHL-1]
- Provide funding and staff consistent with level of commitment to aquaculture development – Current staff and funding may be insufficient to handle expanded aquaculture. [Action SHL-4]

Local Management Framework

Municipalities in New Hampshire play a significant role in environmental management through local land-use controls. Limited state budgets elevate the importance of local regulations. A number of tools are available for local resource management, from standard zoning and land-use regulations to resource protection overlays, cluster development, and growth management ordinances. All municipalities in NHEP Zone A have developed Master Plans and have adopted zoning ordinances and land-use regulations. Specific provisions, such as stormwater management or shoreland protection, vary widely from town to town. The level of sophistication and resources with which individual towns manage development and enforce regulations also varies.

- Improve resource protection regulations – Regulations are quite variable across the estuarine region, leaving some major gaps. [Shoreland: Actions LND-14, LND-16; Wetlands: LND-8A, LND-20, LND-22, LND-25, 25C; Stormwater: LND-22, WQ-9, WQ-10]
- Increase outreach to local officials on importance of resource protection regulations – The NH Coastal Program in conjunction with the regional planning commissions should increase efforts to educate local officials on the importance of resource protection, and assist them in improving local land-use planning and controls. This outreach should be brought directly to town officials rather than provided through regional workshops. [Actions LND- 5, LND-25C, LND-20, LND-14, LND-8A, WQ-10]

- Improve development review and permit procedures – Strategies for improving permit review include increasing staff and budgets, increasing the levels of review, and increasing the use of Conservation Commissions for review. All towns should consider a technical review committee, where individuals with expertise help assess development proposals and permits. [Action LND-6F]
- Ensure adequate enforcement of land-use regulations in all towns – Enforcement of local land-use regulations appears to be limited by lack of coordination between planning boards and building inspectors. Building inspectors and code enforcement officers should be present during planning board meetings to ensure planning board recommendations and conditions are fully understood. Procedures should be implemented for recording and verifying field changes to development projects.
- Improve outreach for developers and landowners – All agencies involved in resource protection should work to educate landowners and the development community on regulations and requirements. [Actions LND-4, LND-8A, LND-16, EDU-4, WQ-13, WQ-18]
- Develop long term monitoring of permit conditions – All towns should develop programs for long-term inspection of erosion and stormwater control measures to ensure proper functioning. Seacoast towns currently have no mechanism for monitoring these structures, with property owners left to maintain them and decide whether or not they are functioning properly.
- All construction permits should receive more than one level of local review – Permits for single-family residential construction on pre-existing lots that do not receive planning board review should nonetheless at least receive one other review for consistency with resource setbacks and other requirements.
- Review variance practices – Towns should examine their zoning board of appeals practices to ensure the requirements of state law are being met.
- Reconsider reliance of NH DES Shoreland Protection Program and other state programs on local governments for enforcement of state regulations – Limited local budgets and staff mean that state programs like the shoreland protection program are often not well implemented or enforced at the local level. Local governments also may not have sufficient motivation to thoroughly enforce state regulations, since pollution and other resource impacts often cross boundaries. [Action LND-14, LND-16]
- Consider watershed-based planning agreements – Communities within individual watersheds should meet as a group to develop common goals and practices that will meet an agreed upon resource protection goal. Minimum resource protection standards developed in this way could help reduce impacts that cross boundaries. [Action LND-6A]

- Examine land-use regulations in the Zone B towns – Zone B towns tend to be smaller, have less staff and resources available, and may have substantial impacts of water quality in the estuary watersheds. The NHEP should work with NH OSP and the regional planning commissions to review land-use regulations in Zone B towns.
[Action LND-6B]
- Increase the number of circuit-rider planners to improve assistance to towns without planning staff – Circuit-rider planners provided by the regional planning commissions play a crucial role in implementing local land-use planning and controls, particularly when small towns are confronted with large development projects.

